

WHAT IS CLAIMED IS:

1. A method of using a delegated connection table, comprising:
  - initializing an entry in the delegated connection table with connection state corresponding to a connection selected by a TCP stack for processing by an offload unit;
  - updating the entry when a first frame is received for the connection; and
  - reading the entry when a second frame is transmitted for the connection.
2. The method of claim 1, further comprising updating the entry when the second frame is transmitted.
3. The method of claim 2, wherein the updating includes copying a portion of the second frame into a portion of the entry in the delegated connection table.
4. The method of claim 1, further comprising uploading payload data to a location specified in the entry within a memory space allocated to an application program.
5. The method of claim 1, further comprising notifying the TCP stack when the first frame received is uploaded by the offload unit to at least one legacy buffer.
6. The method of claim 1, further comprising uploading the first frame to a legacy buffer.
7. The method of claim 1, wherein another frame received does not correspond to another entry in the delegated connection table.

8. The method of claim 6, wherein a sequence number in the first frame does not correspond to a sequence number stored in the delegated connection table.
9. The method of claim 6, wherein a special case is detected in the first frame.
10. The method of claim 9, further comprising uploading the first frame to at least one legacy buffer.
11. The method of claim 9, further comprising notifying an application program to complete processing of the first frame.
12. The method of claim 9, further comprising uploading any subsequent frames received for the connection, to one or more legacy buffers, until resynchronization is signaled by the TCP stack.
13. The method of claim 12, wherein the resynchronization is accomplished by observing ACK numbers generated by the TCP stack.
14. The method of claim 12, further comprising:
  - determining an ACK number in a frame transmitted for the connection is more advanced than a sequence number stored in the entry; and
  - copying the ACK number to the sequence number portion of the entry.
15. A method of accessing a delegated connection table during processing of a received frame, comprising:
  - reading a connection match portion of the delegated connection table;
  - determining the received frame corresponds to an entry in the connection match portion of the delegated connection table;
  - reading a connection data portion of the delegated connection table; and

parsing the received frame to produce payload data.

16. The method of claim 15, further comprising:

modifying a portion of connection state data stored in the connection data portion of the delegated connection table.

17. The method of claim 15, further comprising:

reading a connection buffer portion of the delegated connection table to obtain user buffer information.

18. The method of claim 17, further comprising:

determining the user buffer information indicates a user buffer is not available; and

requesting a user buffer.

19. The method of claim 17, further comprising uploading the payload data to the user buffer.

20. The method of claim 18, further comprising:

determining a receive buffer has reached a high water mark; and  
uploading the payload data to a legacy buffer.

21. The method of claim 18, further comprising:

determining a buffer request timer has expired; and  
uploading the payload data to a legacy buffer.

22. A delegated connection table for storing delegated connection information, comprising:

a first storage resource configured to store user buffer information; and

a second storage resource configured to store delegated connection state information.

23. The delegated connection table of claim 22, further comprising a third storage resource configured to store delegated connection identification information.
24. The delegated connection table of claim 22, further comprising a command processing unit configured to write to the first storage resource.
25. The delegated connection table of claim 22, further comprising a transmit engine configured to access the second storage resource.
26. The delegated connection table of claim 22, further comprising a receive engine configured to access the second storage resource.
27. The delegated connection table of claim 26, wherein the receive engine is configured to read the first storage resource.
28. The delegated connection table of claim 26, wherein the receive engine is configured to read the third storage resource.